

CLAIMS

What is claimed is:

- 5 1. A method for constructing parameterized web documents comprising the steps of:
 - (a) receiving as input a current document to be distributed to a user;
 - (b) identifying a base document that serves as a reference for said current document;
 - (c) decomposing said current document into (i) strings that occur in said base
10 document, and (ii) strings that do not occur in said base document;
 - (d) creating a computer program that when executed on a content browser recreates and displays the current document from (i) said base document, and (ii) said strings that do not occur in said base document; and
 - (e) distributing said computer program to said user in place of sending to said
15 user said current document in its entirety.
2. The method of claim 1 wherein said computer program includes: (i) a base document identifier; (ii) references to portions of said base document for strings that occur in said base document; and (iii) references to strings that do not occur
20 in said base document.
3. The method of claim 1 wherein said program of step (c) is in a scripting language executable on a content browser of said user.
- 25 4. The method of claim 3 where said scripting language is Javascript.
5. The method of claim 1 wherein said computer program is configured so that no special software is required at the user for reconstructing said current document.
- 30 6. The method of claim 5 wherein said program is configured to be self-executing on said content browser.

7. The method of claim 1 wherein said base document shares content with said current document.
- 5 8. The method of claim 1 wherein said base document is accessible to said user from a cache.
9. The method of claim 8 wherein said cache is a local cache of said user's content browser.
- 10 10. The method of claim 8 wherein said cache is a network cache common to a plurality of users.
11. The method of claim 8 wherein said base document is encoded with a lifetime that is greater than an expected usage time therefor.
- 15 12. The method of claim 8 further comprising replacing said base document in said cache when a difference between said current document and said base document exceeds a threshold value.
- 20 13. The method of claim 1 wherein said computer program includes a reference to said base document.
14. The method of claim 13 wherein said reference to said base document is configured to substantially minimize conflicts with references to non-base documents.
- 25 15. The method of claim 13 wherein said reference to said base document is a storage location identifier.
- 30 16. The method of claim 15 where said storage location identifier is a URL.

17. The method of claim 16 where said URL contains a substantially random number.
18. The method of claim 1 wherein said step (b) of identifying said base document is
5 based on degree of similarity to said current document.
19. The method of claim 18 wherein said base document is a previous version of the current document.
- 10 20. The method of claim 1 wherein said base document is a template for said current document.
21. The method of claim 1 wherein said documents are block-based and said strings are said blocks.
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22. The method of claim 21 wherein said block-based documents are representations of video sequences.
23. The method of claim 21 wherein said block-based documents are representations
20 of audio sequences.
24. A computer-readable storage medium encoded with program logic instructions for improving network efficiency of document transmission from a content server to a user, said processing instructions when executed on a computer:
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 - (a) receiving as input a current document to be distributed to a user;
 - (b) identifying a base document that serves as a reference for said current document;
 - (c) decomposing said current document into (i) strings that occur in said base document, and (ii) strings that do not occur in said base document;

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- (d) creating a computer program that when executed on a content browser recreates and displays the current document from (i) said base document, and (ii) said strings that do not occur in said base document; and
- (e) distributing said computer program to said user in place of sending to said user said current document in its entirety.

25. A file server located between, and configured to improve network efficiency of document transmission between, a content server and a user, comprising:
- (a) an input interface configured to:
 - (i) receive a current document to be distributed to a user, and
 - (ii) identify a base document that serves as a reference for said current document;
 - (b) a condensation module configured to:
 - (i) decompose said current document into (x) strings that occur in said base document, and (y) strings that do not occur in said base document, and
 - (ii) create a computer program that when executed on a content browser recreates and displays the current document from (x) said base document, and (y) said strings that do not occur in said base document; and
 - (c) an output interface configured to distribute said computer program to said user in place of sending said current document in its entirety.

26. The file server of claim 25 further comprising a cache configured to provide said base document.

27. A method for constructing parameterized web documents comprising the steps of:
- (a) receiving as input content strings to be distributed to a user;
 - (b) obtaining a base document that serves as a reference for said content strings;

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- (c) representing a current document to be transmitted to said user as a combination of (i) said input content strings and (ii) at least one portion of said base document;
 - (d) creating a computer program in a scripting language that when executed on a content browser recreates and displays the current document from (i) said base document, and (ii) said input content strings; and
 - (e) distributing said computer program to said user in place of sending said current document in its entirety.
- 10 28. A computer-readable storage medium encoded with program logic instructions for improving network efficiency of document transmission from a content server to a user, said processing instructions when executed on a computer:
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- (a) receiving as input content strings to be distributed to a user;
 - (b) obtaining a base document that serves as a reference for said content strings;
 - (c) representing a current document to be transmitted to said user as a combination of (i) said input content strings and (ii) at least one portion of said base document;
 - (d) creating a computer program in a scripting language that when executed on a content browser recreates and displays the current document from (i) said base document, and (ii) said input content strings; and
 - (e) distributing said computer program to said user in place of sending said current document in its entirety.
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- 25 29. A file server located between, and configured to improve network efficiency of document transmission between, a content server and a user, comprising:
- (a) an input interface configured to:
 - (i) receive content strings to be distributed to a user, and
 - (ii) obtain a base document that serves as a reference for said content strings;
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- (b) a condensation module configured to:
 - (i) represent a current document to be transmitted to said user as a combination of (x) said input content strings and (y) at least one portion of said base document, and
 - (ii) create a computer program that when executed on a content browser recreates and displays the current document from (x) said base document, and (y) said input content strings; and
- (c) an output interface configured to distribute said computer program to said user in place of sending said current document in its entirety.

30. The file server of claim 29 further comprising a cache configured to provide said base document.